APPENDIX A. SEARCH STRATEGIES

ANTIPLATELET THERAPY – SEARCH METHODOLOGY

Database Searched and Time Period Covered:

PubMed – From inception to 12/17/2015

Language:

English

Search Strategy:

"Platelet Aggregation Inhibitors"[Mesh] OR antiplatelet therap* OR anti-platelet therap*
AND
pci OR percutaneous coronary intervention*
NOT
stop OR stopped OR stopping OR discontinu*

Database Searched and Time Period Covered:

PubMed – From inception to 12/17/2015

Language:

English

Search Strategy:

“Similar Article” searches on the following articles:

van Kuijk, J. P., W. J. Flu et al (2009). "Timing of noncardiac surgery after coronary artery stenting with bare metal or drug-eluting stents." Am J Cardiol 104(9): 1229-1234.

Sandeep Singla, Sandeep, Rajesh Sachdeva, , Barry F. Uretsky, (2012). “The Risk of Adverse Cardiac and Bleeding Events Following Noncardiac Surgery Relative to Antiplatelet herapy in Patients With Prior Percutaneous Coronary Intervention.” Journal of the American College of Cardiology Vol. 60, No. 20, 2005-16.

Albaladejo, P., E. Marret et al (2011). "Non-cardiac surgery in patients with coronary stents: the RECO study." Heart 97(19): 1566-1572.

Databases Searched and Time Period Covered:

Web of Science and Scopus – From inception to 12/17/2015

Language:

English

Search Strategy:

“Forward (Citation)” searches on the 3 articles cited above.

APPENDIX B. PEER REVIEW COMMENTS/AUTHOR RESPONSES

Comments	Response
p 6; line 15: typo - these	This has been corrected.
p 7; line 13; dual antiplatelet therapy might be better defined as "(aspirin plus a P2Y12 inhibitor)" rather than (almost always clopidogrel and aspirin). Historically, clopidogrel and aspirin has been prescribed. But, use of newer agents such as ticagrelor (and prasugrel) are increasing.	This has now been corrected to “aspirin plus a P2Y12 inhibitor.)” We also elected to add your additional clarification. “Historically, clopidogrel and aspirin has been prescribed. But, use of newer agents such as ticagrelor and prasugrel are increasing.”
p. 22; key question 4: I would suggest mentioning whether any of the newer antiplatelet agents were included (or state that only clopidogrel was studied). The differentiation is noteworthy because theoretically there may be a concern of more bleeding with ticagrelor/prasugrel since they are more potent antiplatelet agents than clopidogrel.	Yes, we included any of the P2Y12 agents, which we clarified on page 4, paragraph 3;. and page 9, paragraph 1. “We did not exclude studies based on the type of APT management (*ie,* all P2Y12 agents were eligible).” Of note, the majority of the included studies looked at clopidogrel.
p. 24; Is the evidence strong enough to conclude that the heterogeneity observed suggests factors other than periop management of antiplatelet therapy are responsible for differences? Or, have no differences been detected because no clinical trials have been conducted adequately assessing for outcomes differences? Would "may" be a better description rather than "suggests"? It would also be helpful to provide some examples of other factors that may influence bleeding/MACE in this population and whether the examples are supported by evidence.	We agree with your comments and have changed the conclusions (page 6, last paragraph; and page 22, first paragraph). “This heterogeneity, combined with small sample sizes, limited the ability to assess the impact of the different aspects of APT – timing of cessation, bridging, restarting therapy, and type of APT. Additionally, the varied range of invasiveness of the procedure, skin excisions to major thoracic cases, contributes to the operative bleeding risk and MACE risk, yet many studies lacks sufficient detail to assess the impact of procedure on the outcomes. These results also suggest that clinical factors other than perioperative APT may be in part responsible for differences in bleeding and MACE rates observed between studies.” Similar edits were made for page 5, last paragraph. “The heterogeneity observed limited the ability to adequately assess the impact of APT management for the wide range of procedures. It is likely that factors other than perioperative management of APT play a role in differences in bleeding and MACE rates observed between studies.” We also provided to the discussion more comments about possible other reasons for developing MACE or bleeding events and added these sentences to our discussion (page 23, paragraph 2). “We theorize that several factors make work in conjunction and be associated with bleeding and MACE events, but the data were too limited to help address this. For example, it is likely that the type of APT and the invasiveness of the operation combined may be associated with bleeding and MACE. However, the majority of studies included a wide range of procedures (skin excision through to thoracic surgery) and the APT management also varied between studies (timing, dual versus single preoperative, cessation versus continuing, and use of bridging).

	Additionally, the outcomes and APT management were often only reported for cases where an event occurred, thus the management of those without an event was unknown. This prevented us from identifying whether one APT management, for a particular type of procedure or group of procedures was protective or harmful. Another possibility is that whether or not the patients' cardiac status was optimized or if they were satisfactorily cleared from a cardiac standpoint was absent from the studies. For example, we could not assess the adequacy of their level of beta blockade, functional status, or cardiac function at the time of surgery. Additionally, perioperative management can also impact development of MACE, such as fluid management, which was not reported in the studies."
Appendix C	We made some cosmetic edits to this appendix to help improve the presentation of the data.

APPENDIX C. EVIDENCE TABLES

Author, year	Sample Description	Setting	Surgical procedures	APT management	Outcomes Follow-up
Alshawabkeh et al, 2013[13]	Sample size; 51, 86% elective, rest urgent Cardiac stent type: DES Mean age: 65 Percent female: 0	One center Academic USA retrospective	Vascular, Abdominal, Orthopedic, Neuro, Endoscopy, Other	**Preoperative**: Dual: ASA/clopidogrel **APT prior to surgery**: Dual 100% **APT management at surgery**: Dual, clopidogrel held: 100%; all therapy held: 35%; ASA continued in 65%. **Antiplatelet cessation >5d, all held:** Yes **Management assessed for post-op outcomes**: Hold all antiplatelet therapies, Hold one **Bridging therapy**: Yes, clopidogrel was discontinued for 5 to 7 days prior to surgery. On the day following clopidogrel discontinuation, patients were admitted for glycoprotein IIa/IIIb inhibitor (mean 7.1 days treatment).	**Outcomes measured:** MACE or other cardiac (MI, death, *etc*), Bleeding, Other, LOS **Follow-up:** Less than 30 day

Author, year	Sample Description	Setting	Surgical procedures	APT management	Outcomes Follow-up
Marcos et al, 2011[14]	Sample size: 21 noncardiac (also 16 cardiac cases) Cardiac stent type: DES Mean age: 66, includes 41% CABG Percent female: 30.6	One center Academic Netherlands retrospective	Abdominal, Orthopedic, Endoscopy, Other	**Preoperative**: Dual: clopidogrel/ASA **APT prior to surgery**: Dual 100% **APT management at surgery**: Dual, clopidogrel held: 100%; all therapy held: 7/36 (19.4%) **Antiplatelet cessation >5d, all held:** Yes, 19.4% **Management assessed for post-op outcomes**: Hold all antiplatelet therapies, Hold ASA **Bridging therapy**: Yes, clopidogrel was discontinued 5 days before, patients admitted 2 days in advance. Patients who discontinued clopidogrel /ASA were admitted 3 days before. Labs assayed 2 h before and 6 h after starting Tirofiban. Labs continued once a day with ECG twice a day. Tirofiban was interrupted 4 h before procedure. If no postoperative risk of bleeding, clopidogrel resumed 12-24 h. If high risk for bleeding, heparin IV until risk decreased. Postintervention monitoring by ECG every 2 h during recovery for complaints of chest pain	**Outcomes measured:** MACE or other cardiac (MI, death, *etc*), Bleeding **Follow-up:** 30 day

Author, year	Sample Description	Setting	Surgical procedures	APT management	Outcomes Follow-up
Yamamoto et al, 2014[15]	Sample size: 151 Cardiac stent type: BMS and DES Mean age: 70.4 Percent female: 17.9	One center Academic Japan retrospective	Vascular, Abdominal, Orthopedic, Neuro, Other	**Preoperative**: Single, ASA; Single, non-aspirin; Dual: clopidogrel/ASA **APT prior to surgery**: Dual: 63/151 (41.7%), Single: 68/151 (45%), Other: Single + Heparin 20/151 (13.2%) **APT management at surgery**: Dual, clopidogrel held; Single aspirin, continued; some bridge with heparin **Antiplatelet cessation >5d, all held:** Yes: clopidogrel 100% of patients **Management assessed for post-op outcomes**: Hold all antiplatelet therapies, Hold one (if on dual), Continue existing **Bridging therapy**: Yes, 20 received heparin	**Outcomes measured:** MACE or other cardiac (MI, death, *etc*), Bleeding **Follow-up:** Unclear
Tanaka et al, 2014[16]	Sample size: 111, 84% on dual therapy Cardiac stent type: DES Mean age: 71 Percent female: 13.5%	One center Academic Japan retrospective	Endoscopy, Other	**Preoperative**: Single, ASA; Single, non-aspirin; Dual: thienopyrdine/ASA **APT prior to surgery**: Dual: 83.8%; Single: ASA; Other: 8% on warfarin, 6% on cilostazol **APT management at surgery**: 100% all oral APT held **Antiplatelet cessation >5d, all held:** Yes : 100% (mean 7.0 days before procedure) **Management assessed for post-op outcomes**: Hold all antiplatelet therapies **Bridging therapy**: No	**Outcomes measured:** MACE or other cardiac (MI, death, *etc*) **Follow-up:** Greater than 30 day Less than 30 day

Author, year	Sample Description	Setting	Surgical procedures	APT management	Outcomes Follow-up
Sonobe et al, 2011[17]	Sample size: 38 Cardiac stent type: BMS and DES Mean age: 71.3 Percent female: 13.2	One center Academic Japan retrospective	Other	**Preoperative**: Single, ASA; Dual ASA/clopidogrel and ASA/Ticlopidine; (and some on warfarin) **APT prior to surgery**: Dual: ASA/ clopidogrel 21.1%, ASA/ticlopidine 21.1%; Single: ASA 55.3%; None: 2.6; also 23% were on warfarin (overlap with APT unknown). **APT management at surgery**: Dual, all therapy held: 42.2%; Single ASA, held: 55.3% **Antiplatelet cessation >5d, all held:** Yes: Most 7 days, except 7.8% 3 days and 2.6% 5 days. **Management assessed for post-op outcomes**: Hold all antiplatelet therapies **Bridging therapy**: Yes, in some, 16/38 (42%) heparin, but 7 were already on warfarin.	**Outcomes measured:** MACE or other cardiac (MI, death, *etc*), Bleeding, Atrial fibrillation **Follow-up:** Less than 30 day; 30 day

Author, year	Sample Description	Setting	Surgical procedures	APT management	Outcomes Follow-up
Cerfolio et al, 2010[18]	Sample size: 64 Stent subset. No mention of elective/urgent Cardiac stent type: BMS and DES Mean age: 67.2 Percent female: 24.9%	One center Academic USA prospective	Other	**Preoperative**: Single, aspirin; Dual, clopidogrel/ASA **APT prior to surgery**: Dual: 42% clopidogrel/ASA; Single : 58% clopidogrel; Other: 132 controls for propensity analysis not on clopidogrel, but most on ASA 32.6% of controls had cardiac stent **APT management at surgery**: Dual, all therapy continued: 14 patients; Single clopidogrel, continued: 19 patients **Antiplatelet cessation >5d, all held:** No **Management assessed for post-op outcomes**: Continue existing **Bridging therapy**: No	**Outcomes measured:** MACE or other cardiac (MI, death, *etc*), Bleeding **Follow-up:** 30 day

Author, year	Sample Description	Setting	Surgical procedures	APT management	Outcomes Follow-up
Ryan et al, 2013[19]	Sample size: 85 Cardiac stent type: "cardiac stents" 12.9% of pts Mean age: 70 Percent female: 43%	One center, prospective, consecutive pts Academic Ireland prospective	Ophthalmology	**Preoperative**: Single, ASA; Single clopidegrol; Dual ASA/clopidegrol; Other: warfarin **APT prior to surgery**: Dual: 10.3% ASA/clopidegrol; Single: 72% ASA and 7.5% clopidegrol; Other: 10.3% warfarin **APT management at surgery**: All therapy continued, 100%. Dual, all therapy continued; Single ASA, continued; Single clopidogrel continued; Other: Warfarin continued **Antiplatelet cessation >5d, all held:** No **Management assessed for post-op outcomes**: Continue existing **Bridging therapy**: No	**Outcomes measured:** Bleeding **Follow-up:** 6 months

Author, year	Sample Description	Setting	Surgical procedures	APT management	Outcomes Follow-up
Capodanno et al, 2015[20]	Sample size: 515; 251 LMWH vs 264 no LMWH Cardiac stent type: BMS and DES Mean age: 68.1 Percent female: 20.6	Multiple centers Academic Italy retrospective	Vascular, Abdominal, Orthopedic, Neuro, Ophthalmology, Endoscopy, and other	**Preoperative**: Single, ASA; Dual clopidogrel/ASA **APT prior to surgery**: Dual: 31.5%; Single: 68.5% **APT management at surgery**: Patients categorized by antithrombotic regimen in the perioperative period. LMWH group discontinued antiplatelet regimen (DAPT or ASA) and bridged with LMWH until antiplatelet drugs were resumed. Clopidogrel/ASA discontinued at least 5 days and 48 hours before the procedure, respectively. No patients in LMWH group underwent procedure while on DAPT or ASA, without bridging. **Antiplatelet cessation >5d, all held:** Yes **Management assessed for post-op outcomes**: Bridging with LMWH vs no LMWH. See above. **Bridging therapy**: Yes, bridging with LMWH, but dosage and timing not described.	**Outcomes measured:** MACE or other cardiac (MI, death, *etc*), Bleeding MACE or other cardiac (MI, death, *etc*), Bleeding, Readmissions, Other, (stroke) **Follow-up:** 30 day

Author, year	Sample Description	Setting	Surgical procedures	APT management	Outcomes Follow-up
Bolad et al, 2011[21]	Sample size: 220, 1770, 238 with noncardiac surgery (18BA; 79BMS; 141DES) Cardiac stent type: BMS and DES Mean age: 66 Percent female: 1.4	One center Academic USA retrospective	Vascular, Abdominal, Orthopedic, Ophthalmology, Endoscopy	**Preoperative**: Single, ASA; Single, non-ASA; Dual **APT prior to surgery**: Dual: 10.4%; Single: 18.6% ASA only, 2% thienopyridine; None: 68.8% **APT management at surgery**: Dual, all therapy continued: 10.4%; Single ASA, continued: 18.6%; Single clopidogrel, continued: 2%; Other: 68.8% (weren't on APT prior to surgery) **Antiplatelet cessation >5d, all held:** Not reported **Management assessed for post-op outcomes**: Hold all antiplatelet therapies **Bridging therapy**: No	**Outcomes measured:** MACE or other cardiac (MI, death, *etc*), Other: Stent Thrombosis MACE or other cardiac (MI, death, *etc*) **Follow-up:** 30 day

Author, year	Sample Description	Setting	Surgical procedures	APT management	Outcomes Follow-up
Hawn et al, 2013[22]	Sample size: 25,641; 28,029 patients had 41,989 procedures within 24 months of pci Cardiac stent type: BMS and DES Mean age: > = 60 y/o (80.6%) Percent female: 1.6	Other, multi-site VA data national retrospective cohort Academic USA retrospective	Vascular, Abdominal, Orthopedic, Neuro, Ophthalmology, other, Eye/ear, Resp, GU, Integ	**Preoperative**: Single, ASA; Single, non-ASA; Dual **APT prior to surgery**: Dual (ASA/clopidogrel): 57.8%; Single 36.6%; None: 6.0% **APT management at surgery**: Dual, all therapy continued: 65.9%; Dual, clopidogrel held: 11.0%; Dual, ASA held: 4.3%; Dual, all therapy held: 18.9% Single ASA, continued: 82.7%; Single ASA, held: 17.3%; Single clopidogrel, continued: 66.7; Single clopidogrel, held: 33.3% **Antiplatelet cessation >5d, all held:** Yes : 24.1% **Management assessed for post-op outcomes**: Hold one (if on dual) **Bridging therapy**: No	**Outcomes measured:** MACE or other cardiac (MI, death, *etc*) **Follow-up:** 30 day **Instruments used:** none

Author, year	Sample Description	Setting	Surgical procedures	APT management	Outcomes Follow-up
Assali et al, 2009[23]	Sample size: 78 Cardiac stent type: DES Mean age: 65.7 Percent female: 20.5	One center Academic Israel retrospective	Vascular, Abdominal, Orthopedic, Neuro, Other	**Preoperative**: Dual **APT prior to surgery**: Unclear **APT management at surgery**: 10 (5.7%) no therapy, 51 (65.4%) on Single (ASA or clopidogrel), 17 (21.8%) on Dual Single ASA, continued: 18%; Single clopidogrel, continued: 42%Outcomes for ASA (with or without clopidogrel) and for clopidogrel (with or without ASA) **Antiplatelet cessation >5d, all held:** 13% ASA and 24% clopidogrel **Management assessed for post-op outcomes**: Hold all antiplatelet therapies, Hold one (if on dual),Continue existing **Bridging therapy**: No	**Outcomes measured:** MACE or other cardiac (MI, death, *etc*), Bleeding MACE or other cardiac (MI, death, *etc*) **Follow-up:** Less than 30 day

Author, year	Sample Description	Setting	Surgical procedures	APT management	Outcomes Follow-up
Brotman et al, 2007[24]	Sample size: 114 Cardiac stent type: DES Mean age: 71 Percent female: 34.3	One center Academic USA retrospective	Vascular, Abdominal, Orthopedic, Neuro	**Preoperative**: Single, ASA; Single, non-ASA; Dual **APT prior to surgery**: Dual (ASA/clopidogrel): 77% **APT management at surgery**: Dual, all therapy continued : 21.1%, Single ASA, continued: 1.8%; Single clopidogrel, continued: 0%, Other: 77.2% no APT at time of surgery **Antiplatelet cessation >5d, all held:** Mean : 14d ASA; 14 Dual Yes : 77% **Management assessed for post-op outcomes**: Hold all antiplatelet therapies, Hold one (if on dual), Continue existing **Bridging therapy**: No	**Outcomes measured:** MACE or other cardiac (MI, death, *etc*), Bleeding **Follow-up:** 30 day
Choi et al, 2010[25]	Sample size: 27 Cardiac stent type: DES Mean age: 67.6 Percent female: 29.6	One center Academic Korea prospective	Other	**Preoperative**: Dual **APT prior to surgery**: Dual: clopidogrel/ASA **APT management at surgery**: Dual, all therapy held: 100% **Antiplatelet cessation >5d, all held:** Yes, 100%: 4.96 +/- 0.71 days **Management assessed for post-op outcomes**: Hold all antiplatelet therapies **Bridging therapy**: No	**Outcomes measured:** MACE or other cardiac (MI, death, *etc*), Bleeding, Other: LOS MACE or other cardiac (MI, death, *etc*) **Follow-up:** Unclear

Author, year	Sample Description	Setting	Surgical procedures	APT management	Outcomes Follow-up
Conroy et al, 2007[26]	Sample size: 22, 42 procedures in 22 pts (incl 17 minor/surface procedures) Cardiac stent type: DES Mean age: Not described Percent female: Not described	One center Academic Australia	Abdominal, Ortho, Endoscopy, Minor procedures	**Preoperative**: Single, Dual **APT prior to surgery**: 39/42 on dual (ASA/clopidogrel) **APT management at surgery**: 21/42 clopidogrel/ASA were continued; 3 cases clopidogrel had been stopped previously; 14 had clopidogrel stopped prior to surgery and ASA continued, 4 had clopidogrel stopped and underwent bridging. **Antiplatelet cessation >5d, all held:** timing unknown **Management assessed for post-op outcomes**: Hold clopidogrel; bridging **Bridging therapy**: Yes, outpatient lovenox or inpatient tirofiban/heparin for 4 patients	**Outcomes measured:** MACE or bleeding **Follow-up:** Not described

APPENDIX D. CITATIONS FOR EXCLUDED STUDIES

1. Rossini R, Musumeci G, Capodanno D et al Perioperative management of oral antiplatelet therapy and clinical outcomes in coronary stent patients undergoing surgery. Results of a multicentre registry. Thrombosis and haemostasis. Feb 2015;113(2):272-282.

2. Warshauer J, Patel VG, Christopoulos G, Kotsia AP, Banerjee S, Brilakis ES. Outcomes of preoperative bridging therapy for patients undergoing surgery after coronary stent implantation: a weighted meta-analysis of 280 patients from 8 studies. Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions. Jan 1 2015;85(1):25-31.

3. Joo MS, Ahn BM, Kim HJ et al Evaluation of feasible timing of elective noncardiac procedure after antiplatelet discontinuation in patients treated with antiplatelet agents. Journal of investigative medicine : the official publication of the American Federation for Clinical Research. Jun 2014;62(5):808-812.

4. Kim BK, Yoon JH, Shin DH et al Prospective and systematic analysis of unexpected requests for non-cardiac surgery or other invasive procedures during the first year after drug-eluting stent implantation. Yonsei medical journal. Mar 2014;55(2):345-352.

5. Mehran R, Baber U, Steg PG et al Cessation of dual antiplatelet treatment and cardiac events after percutaneous coronary intervention (PARIS): 2 year results from a prospective observational study. Lancet (London, England). Nov 23 2013;382(9906):1714-1722.

6. Singla S, Sachdeva R, Uretsky BF. The risk of adverse cardiac and bleeding events following noncardiac surgery relative to antiplatelet therapy in patients with prior percutaneous coronary intervention. Journal of the American College of Cardiology. Nov 13 2012;60(20):2005-2016.

7. Briguori C, Visconti G, De Micco F, Focaccio A. The avantgarde carbostent in patients scheduled for undelayable noncardiac surgery. Thrombosis. 2012;2012:372371.

8. Scacciatella P, D'Amico M, Meynet I et al Rationale and results of percutaneous coronary revascularization with endothelial progenitor cell capture stent in high-risk patients requiring undeferrable non-cardiac surgery. Minerva cardioangiologica. Oct 2011;59(5):411-418.

9. To AC, Armstrong G, Zeng I, Webster MW. Noncardiac surgery and bleeding after percutaneous coronary intervention. Circulation. Cardiovascular interventions. Jun 2009;2(3):213-221.

10. Sanchez-Palomino P, Sanchez-Cobo P, Rodriguez-Archilla A et al Dental extraction in patients receiving dual antiplatelet therapy. Medicina oral, patologia oral y cirugia bucal. Sep 2015;20(5):e616-620.

11. Vlastarakos PV, Sampatakaki A, Kouloumbinis A, Nikolopoulos TP. Perioperative maintenance of dual antiplatelet therapy is safe in patients requiring laser cordectomy for

laryngeal cancer. Journal of B.U.ON. : official journal of the Balkan Union of Oncology. May-Jun 2015;20(3):934.

12. Wakabayashi Y, Wada H, Sakakura K et al Major adverse cardiac and bleeding events associated with non-cardiac surgery in coronary artery disease patients with or without prior percutaneous coronary intervention. Journal of cardiology. Oct 2015;66(4):341-346.

13. Salters C, Bradley B, Charnigo RJ et al Incidence, nature, and temporal trends of adverse events associated with noncardiac procedures among veterans with drug-eluting coronary artery stents. Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions. Aug 2015;86(2):211-219.

14. Bozzani A, Ferlini M, Rossini R et al Antiplatelet therapy management in patients with coronary stent undergoing vascular surgery. The Journal of cardiovascular surgery. Aug 2015;56(4):681-683.

15. Fujikawa T, Tanaka A, Abe T et al Does antiplatelet therapy affect outcomes of patients receiving abdominal laparoscopic surgery? Lessons from more than 1,000 laparoscopic operations in a single tertiary referral hospital. Journal of the American College of Surgeons. Dec 2013;217(6):1044-1053.

16. Brilakis ES, Patel VG, Banerjee S. Medical management after coronary stent implantation: a review. Jama. Jul 10 2013;310(2):189-198.

17. Tokushige A, Shiomi H, Morimoto T et al Incidence and outcome of surgical procedures after coronary bare-metal and drug-eluting stent implantation: a report from the CREDO-Kyoto PCI/CABG registry cohort-2. Circulation. Cardiovascular interventions. Apr 2012;5(2):237-246.

18. van Kuijk JP, Flu WJ, Schouten O et al Timing of noncardiac surgery after coronary artery stenting with bare metal or drug-eluting stents. The American journal of cardiology. Nov 1 2009;104(9):1229-1234.

19. Rabbitts JA, Nuttall GA, Brown MJ et al Cardiac risk of noncardiac surgery after percutaneous coronary intervention with drug-eluting stents. Anesthesiology. Oct 2008;109(4):596-604.

20. Nuttall GA, Brown MJ, Stombaugh JW et al Time and cardiac risk of surgery after bare-metal stent percutaneous coronary intervention. Anesthesiology. Oct 2008;109(4):588-595.

21. Wilson SH, Fasseas P, Orford JL et al Clinical outcome of patients undergoing non-cardiac surgery in the 2 months following coronary stenting. Journal of the American College of Cardiology. Jul 16 2003;42(2):234-240.

22. Morici N, Moja L, Rosato V et al Bridge with intravenous antiplatelet therapy during temporary withdrawal of oral agents for surgical procedures: a systematic review. Internal and emergency medicine. Mar 2014;9(2):225-235.

23. Kaluza GL, Joseph J, Lee JR, Raizner ME, Raizner AE. Catastrophic outcomes of noncardiac surgery soon after coronary stenting. Journal of the American College of Cardiology. Apr 2000;35(5):1288-1294.

24. Vicenzi MN, Meislitzer T, Heitzinger B, Halaj M, Fleisher LA, Metzler H. Coronary artery stenting and non-cardiac surgery--a prospective outcome study. British journal of anaesthesia. Jun 2006;96(6):686-693.

25. Ben Morrison T, Horst BM, Brown MJ, Bell MR, Daniels PR. Bridging with glycoprotein IIb/IIIa inhibitors for periprocedural management of antiplatelet therapy in patients with drug-eluting stents. Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions. Mar 1 2012;79(4):575-582.

26. Eberli D, Chassot PG, Sulser T et al Urological surgery and antiplatelet drugs after cardiac and cerebrovascular accidents. The Journal of urology. Jun 2010;183(6):2128-2136.

27. Albaladejo P, Marret E, Samama CM et al Non-cardiac surgery in patients with coronary stents: the RECO study. Heart (British Cardiac Society). Oct 2011;97(19):1566-1572.

28. Dalal AR, D'Souza S, Shulman MS. Brief review: coronary drug-eluting stents and anesthesia. Canadian journal of anaesthesia = Journal canadien d'anesthesie. Dec 2006;53(12):1230-1243.

29. Albaladejo P, Charbonneau H, Samama CM et al Bleeding complications in patients with coronary stents during non-cardiac surgery. Thrombosis research. Aug 2014;134(2):268-272.

30. Cruden NL, Harding SA, Flapan AD et al Previous coronary stent implantation and cardiac events in patients undergoing noncardiac surgery. Circulation. Cardiovascular interventions. Jun 1 2010;3(3):236-242.

31. Fujikawa T, Tanaka A, Abe T, Yoshimoto Y, Tada S, Maekawa H. Effect of antiplatelet therapy on patients undergoing gastroenterological surgery: thromboembolic risks versus bleeding risks during its perioperative withdrawal. World journal of surgery. Jan 2015;39(1):139-149.

32. Stone DH, Goodney PP, Schanzer A et al Clopidogrel is not associated with major bleeding complications during peripheral arterial surgery. Journal of vascular surgery. Sep 2011;54(3):779-784.

33. Gandhi NK, Abdel-Karim AR, Banerjee S, Brilakis ES. Frequency and risk of noncardiac surgery after drug-eluting stent implantation. Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions. Jun 1 2011;77(7):972-976.

34. Said SM, Esperer HD, Hahn J et al Influence of oral antiplatelet therapy on hemorrhagic complications of pacemaker implantation. Clinical research in cardiology : official journal of the German Cardiac Society. May 2013;102(5):345-349.

35. Finkel JB, Marhefka GD, Weitz HH. Dual antiplatelet therapy with aspirin and clopidogrel: what is the risk in noncardiac surgery? A narrative review. Hospital practice (1995). Feb 2013;41(1):79-88.

36. Anwaruddin S, Askari AT, Saudye H et al Characterization of post-operative risk associated with prior drug-eluting stent use. JACC. Cardiovascular interventions. Jun 2009;2(6):542-549.

37. Saadeh C, Sfeir J. Discontinuation of preoperative clopidogrel is unnecessary in peripheral arterial surgery. Journal of vascular surgery. Dec 2013;58(6):1586-1592.

38. Mortezavi A, Hermanns T, Hefermehl LJ et al Continuous low-dose aspirin therapy in robotic-assisted laparoscopic radical prostatectomy does not increase risk of surgical hemorrhage. Journal of laparoendoscopic & advanced surgical techniques. Part A. Jun 2013;23(6):500-505.

39. Paul S, Stock C, Chiu YL et al Management and outcomes of patients on preoperative plavix (clopidogrel) undergoing general thoracic surgery. The Thoracic and cardiovascular surgeon. Sep 2013;61(6):489-495.

40. Abdel Samie AA, Sun R, Vohringer U, Theilmann L. Safety of endoscopic sphincterotomy in patients under dual antiplatelet therapy. Hepato-gastroenterology. Jun 2013;60(124):659-661.

41. Chechik O, Goldstein Y, Behrbalk E, Kaufman E, Rabinovich Y. Blood loss and complications following carotid endarterectomy in patients treated with clopidogrel. Vascular. Aug 2012;20(4):193-197.

42. Rahman M, Donnangelo LL, Neal D, Mogali K, Decker M, Ahmed MM. Effects of Perioperative Acetyl Salicylic Acid on Clinical Outcomes in Patients Undergoing Craniotomy for Brain Tumor. World neurosurgery. Jul 2015;84(1):41-47.

43. Girotra C, Padhye M, Mandlik G et al Assessment of the risk of haemorrhage and its control following minor oral surgical procedures in patients on anti-platelet therapy: a prospective study. International journal of oral and maxillofacial surgery. Jan 2014;43(1):99-106.

44. Alcock RF, Kouzios D, Naoum C, Hillis GS, Brieger DB. Perioperative myocardial necrosis in patients at high cardiovascular risk undergoing elective non-cardiac surgery. Heart (British Cardiac Society). May 2012;98(10):792-798.

45. Antolovic D, Reissfelder C, Rakow A et al A randomised controlled trial to evaluate and optimize the use of antiplatelet agents in the perioperative management in patients undergoing general and abdominal surgery--the APAP trial (ISRCTN45810007). BMC surgery. 2011;11:7.

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